

Studies in Australian Grasses 9. Two new species of *Aristida* (Arundineae: Aristideae) from Queensland¹

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Summary

Simon, Bryan K. (1994). Studies in Australian Grasses 9. Two new species of *Aristida* (Arundineae: Aristideae) from Queensland. *Austrobaileya* 4(2): 145–148. Two new species of *Aristida* from Queensland are described and compared with other Australian species of *Aristida*. One is *A. thompsonii* from the 'desert uplands' of the North Kennedy District and the other is *A. forsteri* from heathlands of the Darling Downs District.

Keywords: Arundineae: Aristideae, *Aristida thompsonii*, *Aristida forsteri*, *Aristida* – Queensland.

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Introduction

Amongst the grass collections made by John Thompson as part of his project to map the 'desert uplands' of central Queensland, is a very distinctive species of *Aristida* section *Streptachne* which I am pleased to name after him. Another new Queensland *Aristida* species that is close to *A. muricata* in *Aristida* section *Calycinae*, has been collected on two occasions by Paul Forster from the heathland country at the headwaters of Pariagara Creek, west of Bringally on the Darling Downs and I am pleased to name it after him.

Aristida thompsonii B.K.Simon, sp.nov. *A. spuriae* Domin affinis sed lemmate convoluto, aristis crassis relative, arista centrali ad 5 mm longa differt. **Typus:** Queensland. NORTH KENNEDY DISTRICT: 9.5 km W of Homestead, 20°21'S 145°31'E, 30 Aug 1992, *E.J.Thompson* CHA232 & *P.R.Sharpe* (holo: BRI (AQ 562854); iso: AD, CANB, DNA, K).

Perennial, compactly tufted. Culms to 40 cm tall, stright at lower nodes, branched, to 1.5 mm thick, terete; internodes smooth, glabrous, glaucous; nodes 3 or 4, glabrous. Leaf sheaths longer than culm internode, smooth, glabrous, striate; ligule to 0.5 mm long; collar glabrous; blades to 25 cm × 0.75 mm, mostly basal, scaberulous, glabrous, stiffly involute, striate. Inflorescence 6–10 × 0.3 cm, contracted, stiffly

erect with branches to 2 cm long, bearing spikelets from base, without pulvini, loosely appressed, scaberulous. Glumes more or less equal, one nerved, acute, glabrous, faintly scaberulous, entire, awnless; lower glume 5.5–6 mm long, caducous; upper glume 6–7 mm long. Lemma 5.5–6 mm long, 5-nerved, more or less equal to glumes, convolute, smooth, narrowed upwards, biconvex, without an articulation. Callus to 0.5 mm long with hairs to 0.7 mm long. Lemma awns very unequal, rigid, terete; median awn 3.5–4 mm long, gently curved; lateral awns to 1 mm long. Grain to 4.5 mm long, narrowly elliptic, acute at apex and base, furrowed, with embryo to 1.5 mm long. **Fig. 1.**

Specimens examined: Queensland. NORTH KENNEDY DISTRICT: 9.5 km W of Homestead, Aug 1992, *Thompson* CHA232 & *Sharpe* (type) (BRI, CANB, DNA, K); same locality, Sep 1991, *Thompson* CHA377 & *Dillewaard* (BRI).

Conservation Status: 1K (Briggs & Leigh 1988).

Distribution and Habitat: *Aristida thompsonii* is represented in BRI by two specimens from the same locality west of Homestead in central Queensland. It was collected on a flat rocky area in a heath of *Kunzea calida* F.Muell, a species last collected, to my knowledge, as the type specimen from the Newcastle Range in the Cook District in 1868.

Notes: *Aristida thompsonii* is similar to *A. spuria* Domin, differing from that species by

¹ continued from *Austrobaileya* 4: 105–108 (1993).



Fig.1. *Aristida thompsonii*: A. habit $\times 0.5$. B. spikelet, lateral view. C. lower glume, back view. D. upper glume, front view. E. lemma, front view. F. Anther. G. Grain, viewed from furrowed side. H. Grain, viewed from embryo side. B-H, $\times 10$. All drawn from holotype.

the lemma being convolute, as opposed to involute in *A. spuria*, and by the awns being relatively thick with the central awn to 5 mm long, as opposed to relatively thin with the central awn to 7 mm long in *A. spuria*. *A. thompsonii* was first collected in a very fragmentary condition by John Thompson in August 1991, when an examination of the very few spikelets present revealed it to be of interest. Type material was collected again from the same locality in August 1992. The leaves and culms are of a distinctive bluish colour due to their glaucous nature.

***Aristida forsteri* B.K.Simon, sp.nov.** *A. muricatae* Henrard affinis sed glumis inversis leviter, et spiculis parvioribus multis, glumis ad 4.5 mm longis, lemmatibus ad 2.5 mm longis, aristis ad 6 mm longis differt. **Typus:** Queensland. DARLING DOWNS DISTRICT; Head of Pariagara Creek, Wondul Range, 28°11'S, 151° 02'E, 12 Apr 1992, *P.I.Forster* PIF9793 & *P.Machim* (holo: BRI (AQ542693); iso: CANB,K,MEL).

Perennial, compactly tufted. Culms to 50 cm tall, straight at lower nodes, branched, to 1.5 mm thick, terete; internodes scaberulous, glabrous; nodes 2 or 3, glabrous. Leaf sheaths shorter than culm internodes, scaberulous, glabrous, striate; ligule to 0.6 mm long; collar glabrous; blades to 14 cm × 1 mm, glabrous, scaberulous, involute, striate. Inflorescence to 13 × 1 cm, contracted, stiffly erect, with branches to 2 cm long, naked at base, without pulvini, loosely appressed, scaberulous. Glumes inverse, one nerved, mucronate, glabrous, scabrous on keel, entire; lower glume 3.5–4.5 mm long, caducous, with mucro to 0.5 mm long; upper glume 3.2–4.2 mm long, with mucro to 0.5 mm long. Lemma to 2.5 mm long, shorter than

glumes, involute, muricate towards apex, narrowed upwards, terete, without an articulation. Callus to 0.4 mm long, with hairs to 0.7 mm long. Lemma awns unequal, straight and stiffly spreading, compressed at base and terete at apex; median awn to 8 mm long, lateral awns to 6 mm long. Grain to 2 mm long, elliptic, furrowed, with embryo to 0.8 mm long. **Fig. 2.**

Specimens examined: Queensland. DARLING DOWNS DISTRICT: Head of Pariagara Creek, Wondul Range, Apr 1992, *Forster* PIF9793 & *Machim* (type) (BRI,CANB,K,MEL); same locality, *Forster* PIF11644 & *Machim* (BRI,NSW).

Conservation Status: 1K (Briggs & Leigh 1988).

Distribution and Habitat: *Aristida forsteri* is represented by only two specimens from the same locality at the headwaters of Pariagara Creek, west of Bringalily in the Darling Downs District of Queensland. It was collected from heath country on a perched sandstone plateau.

Notes: *Aristida forsteri* is similar to *A. muricata* Henrard, differing from that species by its slightly inverse glumes and its much smaller spikelets, with glumes to 4.5 mm long, lemma to 2.5 mm long and awns to 6 mm long, compared to glumes to 12 mm long, lemma to 8.5 mm long and awns to 30 mm long in *A. muricata*. *A. forsteri* was first collected flowering and fruiting in April 1992, together with an undescribed species of *Triodia* (*P.I.Forster* PIF11641 & *P.Machim*) and it was collected again in September 1992, when all that remained of the spikelets were a few fragmentary glumes.

Reference

- BRIGGS, J.D. & LEIGH, J.H. (1988). *Rare or Threatened Australian Plants*. 1988 Revised Edition. Special Publication No. 14. Canberra: Australian National Parks and Wildlife Service.

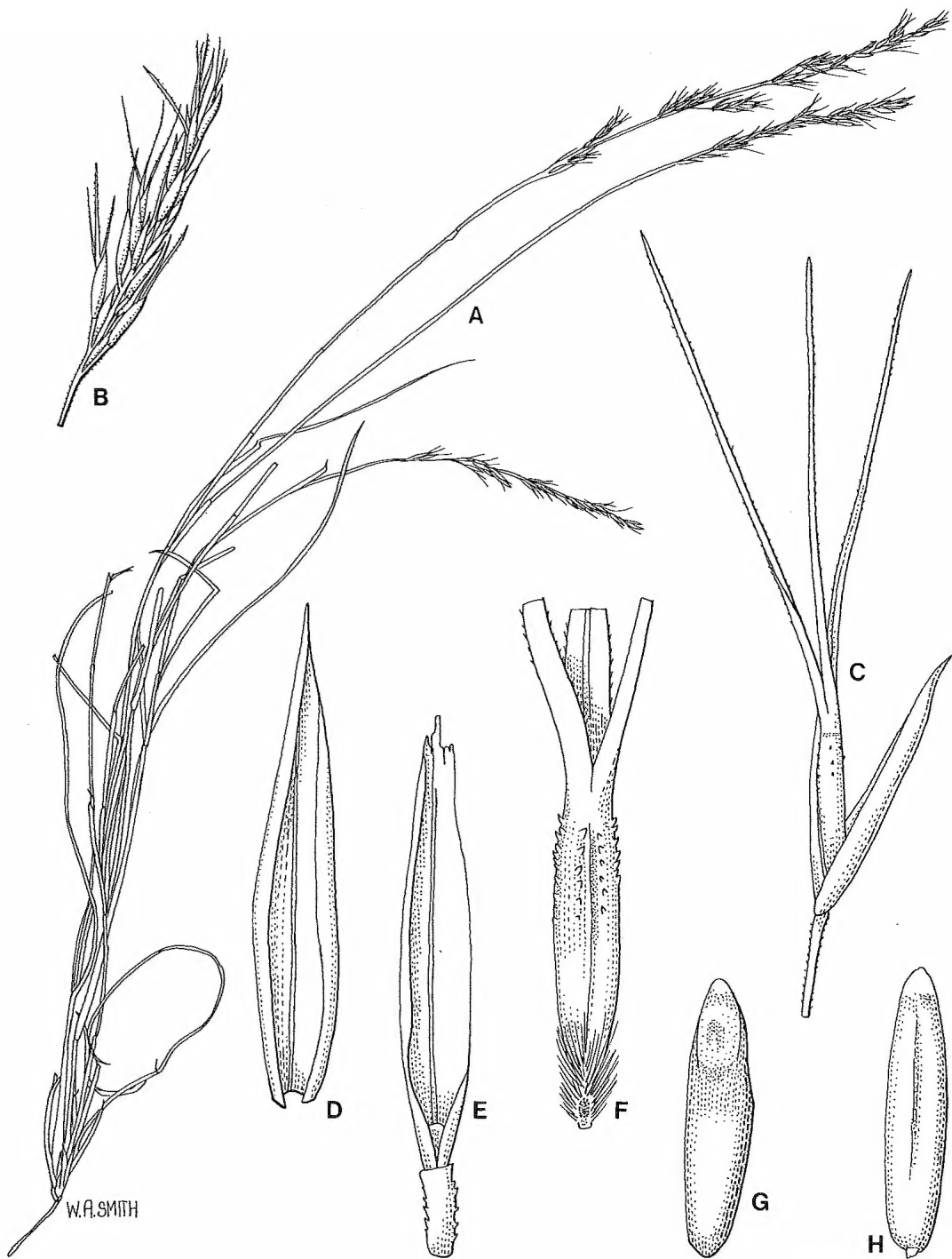


Fig.2. *Aristida forsteri*: A. habit $\times 0.5$. B. portion of inflorescence $\times 2.5$. C. spikelet, lateral view $\times 10$. D. lower glume, front view. E. upper glume, front view. F. lemma, without awns, front view. G. Grain, viewed from embryo side. H. Grain, viewed from furrowed side. E-H, $\times 20$. All drawn from holotype.